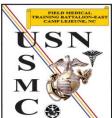
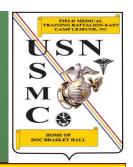
# TACEVAC/EVACUATION





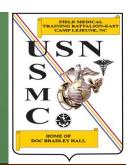
#### **OVERVIEW**



- Taxonomy of Care
- Methods of Evacuation
- TACEVAC Categories
- The 9-Line EVAC
- The MIST Report
- Triage/Mass Casualty



# LEARNING OBJECTIVES



Please Read Your

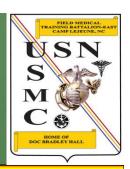
Terminal Learning Objectives

And

**Enabling Learning Objectives** 

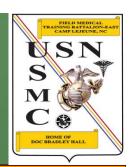


#### TAXONOMY OF CARE



- Distinctive and overlapping care capabilities
- The goal is to evacuate the casualty to the level of care required to meet the needs of the individual.





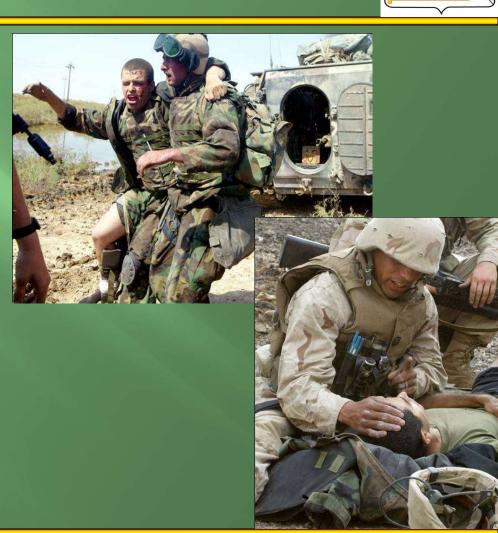
- Commences at the scene of injury and continues until:
  - Member receives definitive care
  - Member is discharged
  - Member is returned to duty

# FIRST RESPONDER CAPABILITY



#### Primary Objective

- First aid and emergency care rendered at the point of injury
- Examples:
  - Self aid
  - Buddy aid
  - BAS



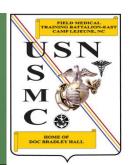
# FORWARD RESUSCITATIVE CAPABILITY



- Builds on First Responder Capabilities
- Advanced treatment as close to point of injury as possible
- Stabilization for evacuation



# FORWARD RESUSCITATIVE CAPABILITY



#### Examples include:

- Medical Battalion
- Casualty Receiving & Treatment Ships
- Shock Trauma Platoon (STP)
- ForwardResuscitative SurgicalSuite (FRSS)



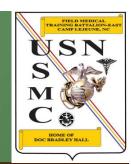
# THEATER HOSPITALIZATION CAPABILITY



- Highest level of care in combat zone
- Located away from enemy threat
  - Fleet Hospitals
  - Hospital Ships

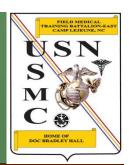


Fleet Hospital Guantanamo Bay





#### **DEFINITIVE CAPABILITY**



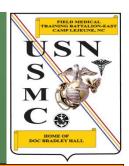
#### **Definitive Care**

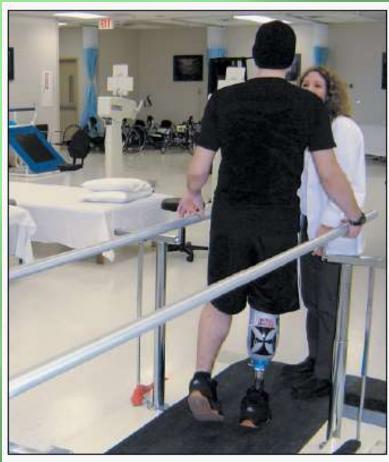
#### Overseas (MTF):

- Comprehensive medical/surgical care
- Definitive care for those who may be RTD within the theater of operations
- Those who cannot RTD will be evacuated via en route care capability



#### DEFINITIVE CAPABILITY





Wounded soldier receiving rehabilitation care at WRAMC.

- Restorative and rehabilitative care
  - OCONUS MTF
  - In CONUS
    - Military hospitals
    - VeteransAdministrationHospitals
    - Selected civilian hospitals



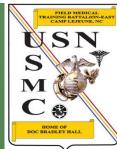


- The continuation of care during evacuation within the continuum without clinically compromising the patient's condition.
  - Casualty Evacuation
  - Medical Evacuation
  - Aeromedical Evacuation



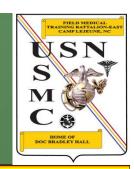
Coordinate TACEVAC

### **METHODS OF EVACUATION**





#### **METHODS OF EVACUATION**



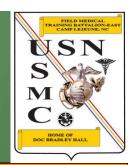


Manual carries

AMBULATORY
"Walking Wounded"



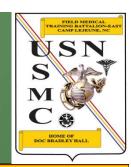
# FIREMAN'S CARRY

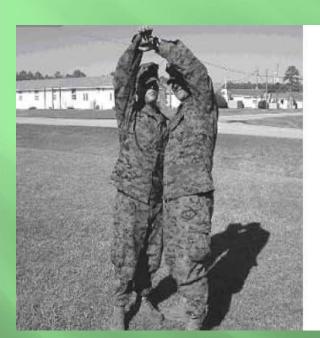


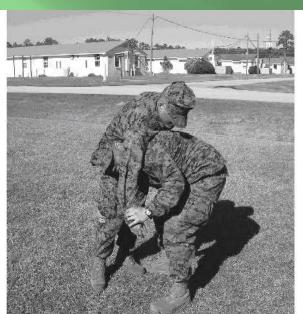


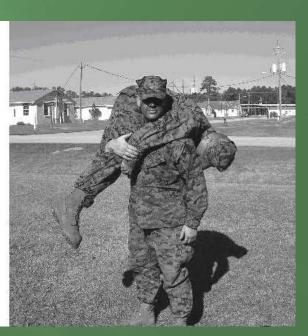
Coordinate TACEVAC

#### FIREMAN'S CARRY

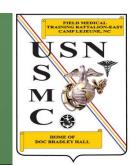






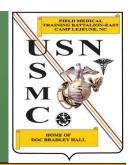


# ONE-MAN SUPPORTING CARRY



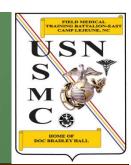


#### SADDLE BACK CARRY



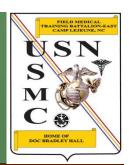


## PACK STRAP CARRY





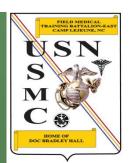
# TWO MAN SUPPORT CARRY







## TWO MAN CARRY



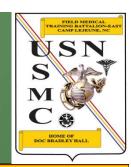






Coordinate TACEVAC

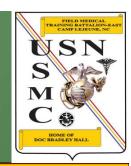
# FORE/AFT CARRY







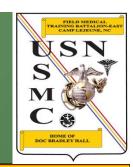
## FOUR-HAND CARRY







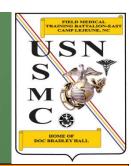
# TWO HAND SEAT CARRY





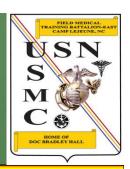


### TWO-HAND SEAT CARRY





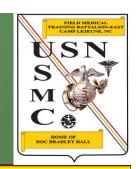
### **CLOTHES DRAG**







#### **METHODS OF EVACUATION**

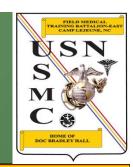




#### Litter transportation

- Talon Litter
- Army Litter
- Stokes Litter
- Pole-less litter
- Miller Board
- Improvised litters

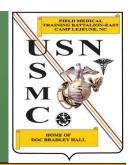
#### TALON LITTER





- Most commonly used litter
- Developed to meet urgent requirement to provide casualty evacuation
- No need to transfer casualty from one litter to another

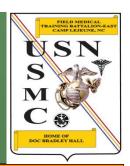
#### STANDARD ARMY LITTER



Does not fold in half, only collapsible the long way

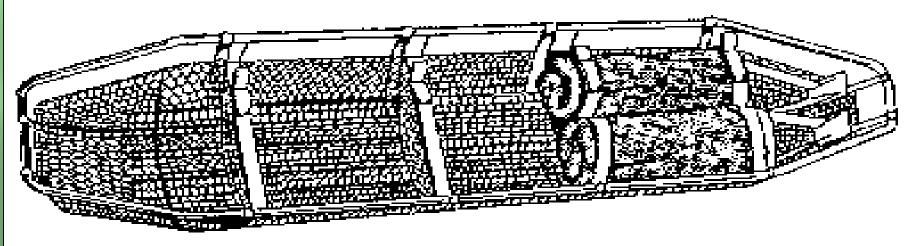


#### STOKES LITTER



Maximum protection for the patient when litter is tilted





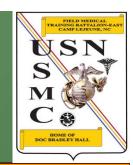
#### POLE-LESS LITTER



- Can be folded and carried by field corpsmen
- Poles can be inserted for carrying long distances



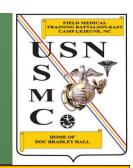
#### MILLER BOARD





- Can be used for confined space and vertical extrication
- Fits in stokes stretcher
- Will float a 250-pound person

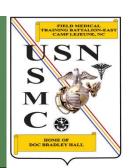
#### IMPROVISED LITTERS



- Used in emergencies when
  - Standard litters are not available
  - Distance too far for manual carries
  - Injury would be aggravated by manual carry
- Must be replaced by standard litter ASAP



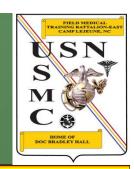
# IMPROVISED LITTERS Example: Blankets / Ponchos



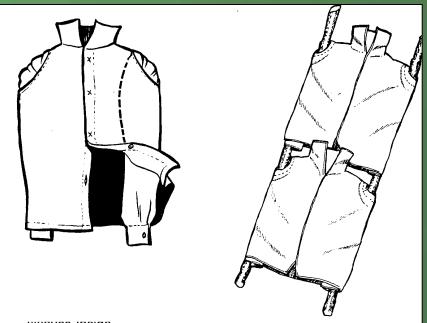




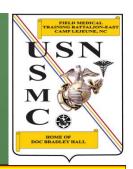
# IMPROVISED LITTERS Example: Blouse







### LITTER EVAC PROCEDURES



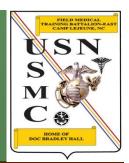
- Movement deliberate and gentle
- Keep litter level and steady
- Carry feet first
  - Except going uphill/stairs
- Load <u>head first</u> into vehicles
- Carry patient's equipment or place on litter





Coordinate TACEVAC

## M-997 AMBULANCE

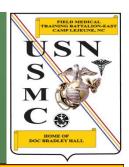






Coordinate TACEVAC

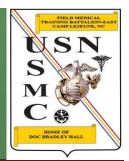
## M-997 AMBULANCE



- 4 litter or 8 ambulatory
- Protects against small arms fire

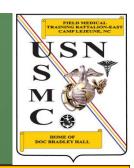


## M-997 AMBULANCE





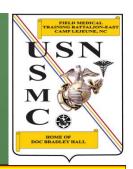
### M-1035 AMBULANCE





- 2 litter and 3 ambulatory
- HMMWV frame with a removable soft top





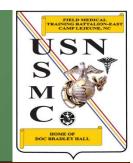
### Can transport 10 litter or 20 ambulatory casualties





Coordinate TACEVAC

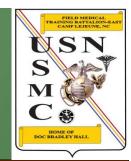
## CH-46 (SEA KNIGHT)





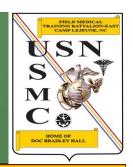


•Can carry 15 litter patients or 22 ambulatory casualties





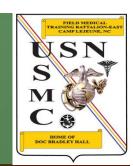
## UH-1 (HUEY)



Able to carry 6 litters or 10 ambulatory casualties



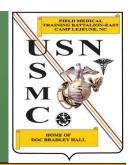
# MV-22 (OSPREY)





When configured with litter racks, able to carry 12 litters or 24 ambulatory

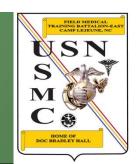
## CH-47 (CHINOOK)



•When configured, can carry 24 litter patients or 31 ambulatory casualties



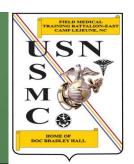






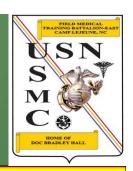
•Can carry 6 litters with modification kit or 7 without modification kit.

# AIR EVACUATION PLATFORMS



- USMC has NO dedicated air TACEVAC platforms
- All aircraft are used as a "lift of opportunity"

### HELICOPTER EVACUATION





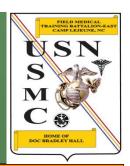
#### ADVANTAGES

- Decreased time lapse between initial treatment and definitive care
- Increases the casualty's chance of survival



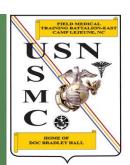
Coordinate TACEVAC

# CASUALTY RECEIVING TREATMENT SHIPS





# CASUALTY RECEIVING TREATMENT SHIPS

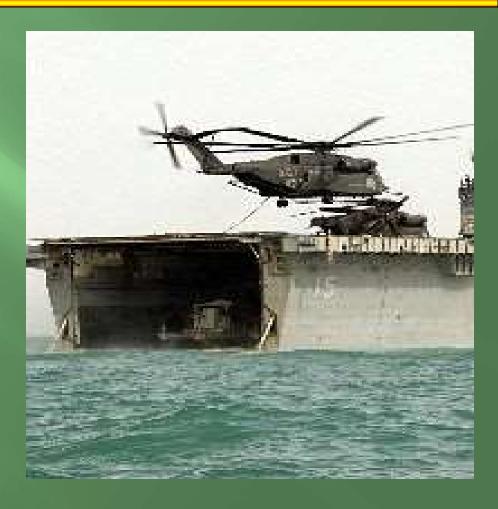


- Mission
  - Assault via helo, landing craft and amphibious vehicle
  - Primary amphibious landing ships for MEFs, MEB's and MEU's
  - Primary CRTS

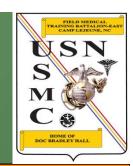
# Landing Helicopter Assault and Dock Landing Ship (LHA/LSD)



- Transport Capabilities
  - Flight deck with large hanger deck and a well deck
  - Receives casualties via helos or waterborne craft
- Medical Capabilities
  - LHD has the largest medical capability of Amphibious Ships (LHA is second)

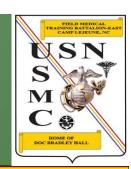


### T-AH



- COMFORT and MERCY
- Mobile, flexible, rapidly responsive afloat medical capability
- Provide full-service hospital asset for use by other government agencies in support of disaster relief and humanitarian operations

### T-AH

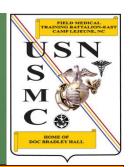


- Transport Capabilities
  - Flight deck capable of receiving rotary wing aircraft
- Medical Capabilities
  - 12 ORs
  - 100 ICU beds
  - 400 Immediate care beds
  - 500 Ward beds



Coordinate TACEVAC

## CASEVAC CATEGORIES



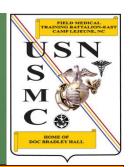
#### URGENT

- Evacuation to save life or limb
- Life threatening injuries
- Evac must occur within 2 hours

### URGENT SURGICAL

- Wounds that will require surgical intervention
- Patients must be taken to a facility that can perform the procedure needed
- CASEVAC must occur within 2 hours

## CASEVAC CATEGORIES



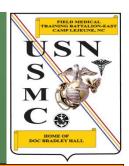
#### PRIORITY

- Serious but not currently life threatening injuries
- Evacuation should occur within 4 hours or patient could become an URGENT

### ROUTINE

- Evacuation is needed to complete full treatment
- Evacuation may occur within 24 hours

### CASEVAC CATEGORIES



#### CONVENIENCE

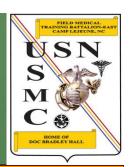
- Patients moved for administrative purpose
- During evacuation of patients, ensure that they are kept warm!!!!

PREVENT HYPOTHERMIA!!!!!



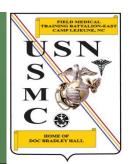
Coordinate TACEVAC





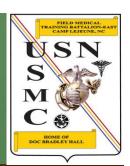
- Standard format used to request a CASEVAC
- Speak clearly
- Use only authorized brevity codes
- Don't need to memorize, use pocket card

## 9 LINE CASEVAC REQUEST



- Line 1. Location
- Line 2. Radio Freq and Call sign
- Line 3. Precedence (Urgent, Urgent Surgical Priority, Routine, Convenience)
- Line 4. Special Equipment
- Line 5. Number of Patients by type
- Line 6. Security of pick up site
- Line 7. Method of marking site
- Line 8. Patient's Nationality and status
- Line 9. NBC Contamination

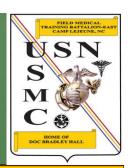




## Example:

- Pitchfork Six this is Blue Thunder over.
- Blue Thunder this is Pitchfork Six, go ahead
- Pitchfork six, standby for CASEVAC REQUEST over.
- Roger, standing by to copy CASEVAC
   Request

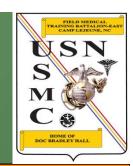




- 1. Line 1 Delta Hotel one two tree four, fife six seven eight
- 2. Line 2 niner niner six fife, Blue Thunder
- 3. Line 3 Bravo One, Charlie One
- 4. Line 4 Alpha

Break

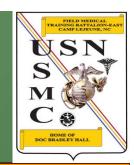




- 5. Line 5 Lima 1, Alpha 1
- 6. Line 6 November
- 7. Line 7 Charlie
- 8. Line 8 Alpha 2
- 9. Line 9 none

Over





M – Mechanism of Injury

I – Injuries Sustained

S – Signs and Symptoms

T - Treatments



Coordinate TACEVAC

## **Conduct Triage**





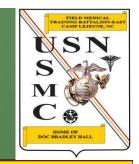
□ 3/5 Kilo Company evacuates three critically wounded Marines following a firefight.
□ Sangin, Afghanistan. 2010.





 Sorting casualties into groups based on their immediate medical needs

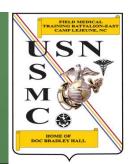
Establishes the order of treatment and movement



#### PRINCIPLES OF TRIAGE

- Accomplish the greatest good for the greatest number of casualties
- Employ the most efficient use of available resources
- Return personnel to duty as soon as possible

#### **FACTORS**



- Number of Casualties
- Resources available
  - > Personnel, equipment, time, etc.
- Attention towards easily treatable conditions
- Rapid and accurate assessments
- Continuous reassessment and re-triage



Coordinate TACEVAC



#### **CATEGORIES OF TRIAGE**

- **4 Categories that are COLOR CODED**
- Category I = Immediate, RED
- Category II= Delayed, YELLOW
- **□** Category III= Minimal, GREEN
- Category IV= Expectant, BLACK



#### **CATEGORIES OF TRIAGE**

#### **IMMEDIATE - RED TAG**

- Life threatening
  - The patient WILL die without treatment
  - The key to successful triage is to locate these individuals as quickly as possible.
- This treatment should:
  - NOT be time consuming
  - Be for casualties that have a high chance of survival
- Casualties do not remain in this category for an extended period of time. They are either found, triaged and treated, or they die!



## CATEGORIES OF TRIAGE RED TAG

- Airway Compromise
- Breathing Compromise
- Circulation Compromise
- Other (heatstroke, Decompensated shock, Rapidly deteriorating responsiveness)



#### **CATEGORIES OF TRIAGE**

#### **DELAYED - YELLOW TAG**

- Serious, potentially life-threatening but can safely wait a few hours
- Likely to need surgery, but whose general condition permits delay in surgical treatment without unduly endangering the life, limb, or eyesight of the casualty.
- Sustaining treatment will be required (e.g., oral or IV fluids, splinting, administration of antibiotics and pain control), but can wait.



## CATEGORIES OF TRIAGE YELLOW TAG

- Compensated Shock
- Closed Fractures or injuries causing circulatory compromise
- Open fractures and dislocations
- Intra-abdominal and/or thoracic wounds
- Burns to less than 20% of total body surface area (TBSA).



## CATEGORIES OF TRIAGE YELLOW TAG

- Controlled hemorrhage
- Abdominal, thoracic, spinal or head injuries
- Severe combat stress or psychosis



#### CATEGORIES OF TRIAGE

#### •MINIMAL – GREEN TAG

- Walking wounded
- May remain stable for days
- Self Aid/Buddy Aid
- Should be utilized for mission requirements (e.g., security), to help treat and/or transport the more seriously wounded, or put back into the fight.



## CATEGORIES OF TRIAGE GREEN TAG

- Minor Lacerations/Abrasions
- Uncomplicated Closed Fractures,
   Dislocations, Sprains, Strains
- Small burns
- Frostbite



#### **CATEGORIES OF TRIAGE**

#### **EXPECTANT - BLACK TAG**

- Treatment for these casualties would be time consuming and complicated
- The extent of treatment (if any) depends on supplies and manpower
- Casualties have wounds that are so extensive, that even if they were the sole casualty and had the benefit of optimal medical resources, their survival would be unlikely.
- Examples of expectant casualties are the unresponsive with injuries such as penetrating head trauma with obvious massive damage to the brain.



## CATEGORIES OF TRIAGE BLACK TAG

Should not be neglected and should receive comfort measures and pain medication if possible, and deserve retriage as appropriate.

After immediate and delayed casualties are treated and/or evacuated, black tag casualties should be re-triaged and treated based upon personnel and supplies.



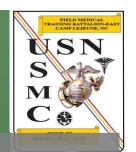
## CATEGORIES OF TRIAGE BLACK TAG

- Cardiac Arrest
  - ➤ In casualties with no pulse or respirations, bilateral chest decompressions to rule out tension pneumothorax should be performed
- Massive Brain/Head Trauma
- Second or Third degree burns over 70% BSA



Coordinate TACEVAC





•You learned about the card in lesson 209, Communication, Documentation, Prepare for Evacuation.



TACTICAL COME	AT CASU	ALTY CAI	RE (TCCC	) CARD			
BATTLE ROS	STER #:			-1			
EVAC: [	Urgent 🗌	Priority					
NAME (Last, First):			LAST 4:				
GENDER: M F DAT	GENDER: M F DATE (DD-MMM-YY):			TIME:			
SERVICE:UNI	SERVICE:UNIT:			ALLERGIES:			
Mechanism of Injury: ( ☐ Artillery ☐ Blunt ☐ Landmine ☐ MVC	X all that apply	) ]Fall ☐ Gr					
Injury: (Mark injuries with an	X)						
TQ: R Arm TYPE: TIME:  TQ: R Leg TYPE: TIME:	18 4.5	TQ: L Arn TYPE: TIME:  TQ: L Leg TYPE: TIME:	5.5	45 25 25 25 25 25 25 25 25 25 25 25 25 25			
Signs & Symptoms: (Fil							
Time	1						
Pulse (Rate & Location)							
Blood Pressure		/	/	/			
Respiratory Rate	1						
Pulse Ox % O2 Sa							
AVPL	i						
Pain Scale (0-10)							
DD Form 1380, JUN 2014			T	CCC CARD			

		ROSTER#:	rity □ Ro	utine				
C: TC	≀- □Extremity	at apply, and fill in the blank  Junctional Tru  mostatic Pressure	ıncal	Ту	pe			
		□CRIC □ET-Tube	_	-				
B: O2 Needle-D Chest-Tube Chest-Se			Volume	Route	Time			
C:		Name	volume	Route	Time			
	Fluid							
	Blood Product							
MEDS	S: [	Name	Dose	Route	Time			
(	Analgesic e.g., Ketamine, Fentanyl, Morphine)							
(e.	Antibiotic g., Moxifloxacin, Ertapenem)							
	Other (e.g., TXA)							
	Hypothermia	t-Pill-Pack	nield (□R	□L) □S	plint			
NOTES	S:							
	RESPONDER							
	NAME (Last, First):			LAST 4:				



- This card is based on the principles of TCCC.
- It addresses the initial lifesaving care provided at the point of wounding.
- It should be filled out by whomever is caring for the casualty.
- Its format is simple with a circle or "X" in the appropriate block.



- A TCCC Casualty Card should be kept in each IFAK.
- Use an indelible marker to fill it out.
- When used, attach it to the casualty's belt loop, or place it in their upper left sleeve, or the left trouser cargo pocket.
- Include as much information as you can.



- The card does not imply that every casualty needs all the interventions listed.
- You may not be able to perform all the interventions that the casualty needs.
- The next person caring for the casualty can add to the interventions performed.
- This card can be filled out in less than two minutes.
- It is important that we document the care given to the casualty.



- Record each intervention in each category.
- If you are not sure what to do, the card will prompt you where to go next.
- Simply circle the intervention you performed.
- Explain any action you want clarified in the remarks area.

## TCCC Card Abbreviations



- **□** DTG = Date-Time Group (e.g. 160010Oct2009)
- **■** NBC = Nuclear, Biological, Chemical
- $\Box$  TQ = Tourniquet
- **■** GSW = Gunshot Wound
- **■** MVA = Motor Vehicle Accident
- AVPU = Alert, Verbal stimulus, Painful stimulus, Unresponsive
- **□** Cric = Cricothyroidotomy
- NeedleD = Needle decompression
- IV = Intravenous
- **■** IO = Intraosseous
- **■** NS = Normal Saline
- **■** LR = Lactated Ringers
- **■** ABX = Antibiotics





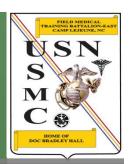
TCCC After-Action Report

	For use o	MEDICAL RI Fithis form, see AR 4					E		
REPORT TITLE TACTICAL COMBAT CASUALTY CARE-AFTER ACTION REPORT			ı,			JTS APPROVE	IS APPROVED (Date) 101 40310) - VA.0		
Event: Date	Time	Country	G.	[3]	AOR/Re	gion			
Phase Care Under F	re Tactical F	leld Care 🔲 A	id Station Care	Battle Inju	y WIA	KIA Mon	Battle Injur	Ally A	□ Dea
Machanism  Aircraft Crash  Blast - ED or Wine Otsmounted  Blast - ED or Wine Mounted  Blast - ED or Wine Mounted  Blast - ED or Grounds  Blast - Other  Blunt  Burn  CollapseCrush from Structure  Drowning  Environmental  Fall, Height ft  Fragmentation (Shrappel)  Gun Shock Wound  Motor Vehicle Crash		0 1 1 1 1 1 1 1	Amputation (AMP)   Burn (B), TBS A						
Parachute incide Other	int	112	Other		-	19.6		粉粉	
			Visal	Signs					
NM	] W □W0 □ ] W □W0 □ ] W □W0 □	TQ-CAT TO TQ-CAT TO TQ-CAT TO TQ-CAT TO TQ-Multiple to th TQ-Junctional, Ty	Q-SOFTT [ Q-SOFTT [ Q-SOFTT [ g-same extremi pe & Region _	oorrhage Co TQ-Other TQ-Other	Ouger.	77 (0.70)		E 🗌 RLE	
NM [ NM [	] W   W	Pressure Dressing Other Dressing, T Splint, Type	rype	way					
[NM [	] M   MO	ET-Endotracheal	Tube, Type	DEPARTMENT/	SERM CE/CLII	HC (Freeding Unit)	Į0	ATE	
FATIENT'S IDENTIFICATION ( Last Name ERIA R	erk	First Name Unit		TWZ AGW	M	_ 0	STORY/FHYSICA AGNOSTIC STUR E-IGR EX AMENAT	ES PLO	
SSN D	08	Gender M	F Alleroy	₩ OH	W.	100	HER, Specify		



## TCCC After Action Report

- This electronic AAR is intended to be completed when the first responder returns to base.
- It is more complete than the TCCC Card.
- It should be submitted to the Joint Theater Trauma System Director within 72 hours of casualty evacuation.
- Both the TCCC Card and the TCCC AAR are required for optimal patient care documentation.

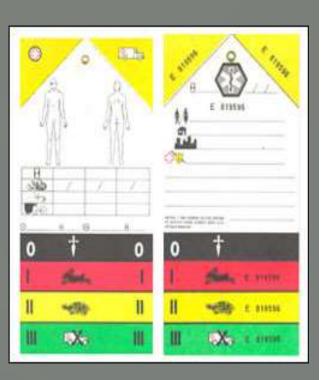


#### •METTAG

- •Furnishes essential information about injury and treatment provided
- Sole or initial medical record for troops injured in combat
- 7 character serial number identifies and tracks casualties



- Stays with the patient at all times
- The yellow corner with ambulance picture and serial number stays with the evacuating vehicle
- The yellow corner with first aid sign and serial number stays with the BAS





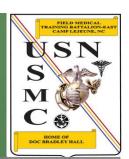
#### **MASS CASUALTY TRIAGE**

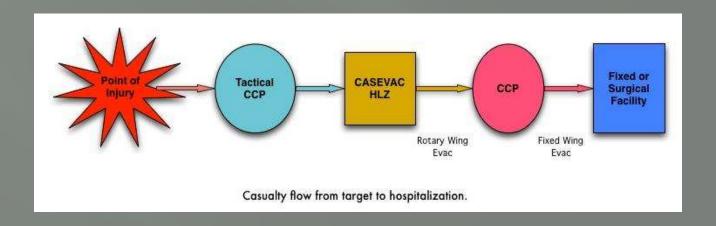
- Always be prepared to deal with mass casualties
- Establish and rehearse plans
- Remember triage is not treatment, but constant reassessment



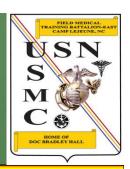
Coordinate TACEVAC

# Casualty Collection Points in the Evacuation Chain



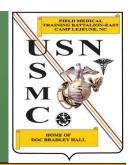


## **CCP Site Selection**

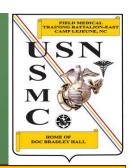


- Should be reasonably close to the fight.
- Located near areas where casualties are likely to occur.
- Must provide cover and concealment from the enemy.
- Inside a building or on hardstand (an exclusive CCP building limits confusion).
- Should have access to evacuation routes (foot, vehicle, aircraft).
- Proximal to "Lines of Drift" or paths across terrain that are the most likely to be used when going from one place to another.

## **CCP Site Selection**

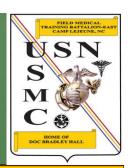


- Adjacent to Tactical Choke Points (breeches, HLZ's, etc.)
- Avoid natural or enemy choke points.
- Choose an area providing passive security (inside the perimeter).
- Good drainage
- Accessible to evacuation assets
- Expandable if casualty load increases

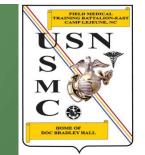


- Typically, a First Sergeant (1SG) or Platoon Sergeant (PSG), or equivalent, is given responsibility for casualty flow and everything <u>outside</u> the CCP:
  - Provides for CCP structure and organization (color coded with chemlights).
  - Maintains command & control and battlefield situational awareness.
  - Controls aid & litter teams, and provides security.

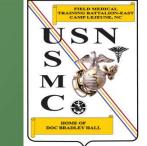




- First Sergeant (1SG), Platoon Sergeant (PSG) or equivalent:
  - Strips, bags, tags, organizes, and maintains casualties' tactical gear outside of treatment area.
  - Accountable for tracking casualties and equipment into and out of CCP and reports to higher command.
  - Moves casualties through CCP entrance/exit choke point which should be marked with an IR chemlight.

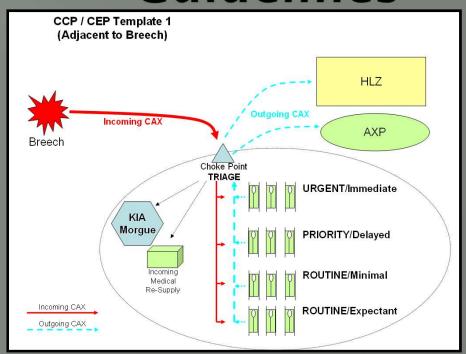


- Medical personnel are responsible for everything <u>inside</u> the CCP:
  - Triage officer sorts and organizes casualties at choke point into appropriate treatment categories.
  - Medical officers and medics organize medical equipment and supplies and treat casualties.
  - EMTs, First Responders, and Aid &Litter Teams assist with treatment and packaging of casualties.



- Casualties with minor injuries should remain with their original elements or assist with CCP security if possible.
- Those killed in action should remain with their original elements.





This is a typical configuration of a CCP receiving
casualties from a nearby encounter with hostile forces.



Coordinate TACEVAC

## TACEVAC/EVACUATION



